



FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE STATEMENT BY APPLICANT (USE SEVERAL SHEETS IF NECESSARY)	ATTY. DOCKET NO. NIH147.001D1	APPLICATION NO. Unknown
	APPLICANT Szkudlinski, et al.	
	FILING DATE Herewith	GROUP Unknown

JCB79 U.S. PTO
 10/05/91
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U.S. PATENT DOCUMENTS						
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS
<i>[Signature]</i>	1.	5,503,995	04/02/96	Khudyakov, et al.		

FOREIGN PATENT DOCUMENTS								
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
	2.	WO 90/02812	03/22/90	WIPO				
	3.	WO 91/16922	11/14/91	WIPO				
	4.	EP 0 404 458 A2	06/15/90	EPO				

EXAMINER INITIAL	OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)	
<i>[Signature]</i>	5.	Abrahmsen, L., et al., Engineering Subtilisin and Its Substrates for Efficient Ligation of Peptide Bonds in Aqueous Solution. Biochemistry, 30:4151 (1991)
	6.	Ascoli, M., Characterization of Several Clonal Lines of Cultured Leydig Tumor Cells: Gonadotropin Receptors and Steroidogenic Responses. Endocrinology, 108:88-95 (1981)
	7.	Baggiolini, M. and Clark-Lewis, et al., Interleukin-8, a chemotactic and inflammatory cytokine. FEBS Letter, 307(1):97-101 (July 1992)
	8.	Ben-Rafael, Z., et al., Pharmacokinetics of follicle-stimulating hormone: clinical significance. Fertility and Sterility, 63(4):689-700 (1995)
	9.	Benua, R. S., et al., An 18 Year Study of the Use of Beef Thyrotropin to Increase I ¹³¹ Uptake in Metastatic Thyroid Cancer. J. Nucl. Med., 5:796-801 (1964)
	10.	Bodansky and Trost, Eds., "Principles of Peptide Synthesis", Springer-Verlag, Inc., N.Y. (1993) (Title page only)
	11.	Brake, A. J., et al., α -Factor-directed synthesis and secretion of mature foreign proteins in <i>Saccharomyces cerevisiae</i> . Proc. Natl. Acad. Sci. USA, 81:4642-4646 (1984)
	12.	Campbell, R. K., et al., Conversion of human choriogonadotropin into a follitropin by protein engineering. Proc. Natl. Acad. Sci. USA, 88:760-764 (1991)
	13.	Clark-Lewis, I., et al., Chemical Synthesis, Purification, and Characterization of Two Inflammatory Proteins, Neutrophil Activating Peptide 1 (Interleukin-8) and Neutrophil Activating Peptide 2. Biochemistry, 30:3128-3135 (1991)
	14.	Clark-Lewis, I., et al., Structural Requirements for Interleukin-8 Function Identified by Design of Analogs and CXC Chemokine Hybrids. J. Biol. Chem., 269(23):16075-16081 (1994)
	15.	Clore, G. M., et al., Three-Dimensional Structure of Interleukin 8 in Solution. Biochemistry, 29:1689-1696 (1990)
	16.	Combarnous, Y., Molecular Basis of the Specificity of Binding of Glycoprotein Hormones to Their Receptors. Endocrine Rev., 13(4):670-691 (1992)
<i>[Signature]</i>	17.	Cunningham, B. C., et al., Receptor and Antibody Epitopes in Human Growth Hormone Identified by Homolog-Scanning Mutagenesis. Science 243:1330-1336 (1989)

EXAMINER <i>[Signature]</i>	DATE CONSIDERED <i>7/25/05</i>
*EXAMINER: INITIAL IF CITATION CONSIDERED, WHETHER OR NOT CITATION IS IN CONFORMANCE WITH MPEP 609; DRAW LINE THROUGH CITATION IF NOT IN CONFORMANCE AND NOT CONSIDERED, INCLUDE COPY OF THIS FORM WITH NEXT COMMUNICATION TO APPLICANT.	

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EXAMINER INITIAL	OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)
<i>A</i>	18. Dawson, P. E., et al. Synthesis of Proteins by Native Chemical Ligation. Science, 266:776-779 (1994)
	19. de Lisle Milton, R. C., et al., Synthesis of Proteins by Chemical Ligation of Unprotected Peptide Segments: Mirror-Image Enzyme Molecules, D- & L-HIV Protease Analogs. "Techniques in Protein Chemistry IV," Academic Press, New York, pp. 257-267 (1993)
	20. Dias, J. A., et al., Receptor Binding and Functional Properties of Chimeric Human Follitropin Prepared by an Exchange between a Small Hydrophilic Intercysteine Loop of Human Follitropin and Human Lutropin. J. Biol. Chem., 269(41):25269-25294 (1994)
	21. Dimhofer, S., et al., Free α subunit of human chorionic gonadotrophin: molecular basis of immunologically and biologically active domains. J. Endocrinol., 140:145-154 (1994)
	22. Ferretti, L., et al, Total synthesis of a gene for bovine rhodopsin. Proc. Natl. Acad. Sci. USA, 83:599-603 (1986)
	23. Fiddes, J. C., et al., Isolation, cloning and sequence analysis of the cDNA for the α -subunit of human chorionic gonadotropin. Nature, 281:351-356 (1979)
	24. Fontaine, Y.-A. and Burzawa-Gerard, E., Esquisse de l'Evolution des Hormones Gonadotropes et Thyreotropes des Vertebres. Gen. Comp. Endocrinol., 32:341-347 (1977)
	25. Golos, T. G., et al., Molecular Cloning of the Rhesus Glycoprotein Hormone α -Subunit Gene. DNA and Cell Biol., 10(5):367-380 (1991)
	26. Grant, G. A., "Synthetic Peptides: A User Guide". W.H. Freeman and Co., N.Y. (1992) (Title page only)
	27. Grossmann, M., et al., Role of the Carboxy-Terminal Residues of the α -Subunit in the Expression and Bioactivity of Human Thyroid-Stimulating Hormone. Mol. Endocrinol. 9(8):948-958 (1995)
	28. Hershman, J. M. and Edwards, C. L., Serum Thyrotropin (TSH) Levels after Thyroid Ablation Compared with TSH Levels after Exogenous Bovine TSH: Implications for ^{131}I Treatment of Thyroid Carcinoma. J. Clin. Endocrinol. Metab., 34:814-818 (1972)
	29. Igarashi, S., et al., Functional expression of recombinant human luteinizing hormone. Biochem. Biophys. Res. Commun., 201(1):248-256 (1994)
	30. Ji, I., et al., Receptor Activation of and Signal Generation by the Lutropin/Choriogonadotropin Receptor. Biol. Chem., 268(31):22971-22974 (1993)
	31. Jiang, X., et al., Structural predictions for the ligand-binding region of glycoprotein hormone receptors and the nature of hormone-receptor interactions. Structure, 3:1341-1353 (1995)
	32. Joshi, L., et al., Recombinant Thyrotropin Containing a β -Subunit Chimera with the Human Chorionic Gonadotropin- β Carboxy-Terminus Is Biologically Active, with a Prolonged Plasma Half-Life: Role of Carbohydrate in Bioactivity and Metabolic Clearance. Endocrinology, 136(9):3839-3848 (1995)
	33. Kajava, A. V., et al., Modeling of the three-dimensional structure of proteins with the typical leucine-rich repeats. Structure, 3:867-877 (1995)
	34. Laphorn, A. J., et al., Crystal structure of human chorionic gonadotropin. Nature, 369:455-461 (1994)
	35. Leinung, M.C., et al., Synthetic Analogs of the Carboxyl-Terminus of β -Thyrotropin: The Importance of Basic Amino Acids in Receptor Binding Activity. Biochemistry, 31(41):10094-10098 (1992)
	36. Licht, P., et al., Evolution of Gonadotropin Structure and Function. Rec. Progr. Horm. Res. 50:169-248 (1997)
	37. Liu, C., et al., Site-directed Alanine Mutagenesis of Phe ³³ , Arg ³⁵ , and Arg ⁴² -Ser ⁴³ -Lys ⁴⁴ in the Human Gonadotropin α -Subunit. J. Biol. Chem., 268(29):21613-21617 (1993)
	38. Liu, W.-K., et al., The Role of the Amino Group in Subunit Association and Receptor Site Interaction for Ovine Luteinizing Hormone as Studied by Acylation. J. Biol. Chem., 249(17):5544-5550 (1974)
	39. Lunardi-Iskandar, Y., et al., Tumorigenesis and metastasis of neoplastic Kaposi's sarcoma cell line in immunodeficient mice blocked by a human pregnancy hormone. Nature, 375:64-68 (1995)
<i>V</i>	40. Meier, C. A., et al., Diagnostic Use of Recombinant Human Thyrotropin in Patients with Thyroid Carcinoma (Phase I/II Study). J. Clin. Endocrinol. Metab., 78:188-196 (1994)

EXAMINER <i>J. Specto</i>	DATE CONSIDERED <i>7/25/05</i>
*EXAMINER: INITIAL IF CITATION CONSIDERED, WHETHER OR NOT CITATION IS IN CONFORMANCE WITH MPEP 609; DRAW LINE THROUGH CITATION IF NOT IN CONFORMANCE AND NOT CONSIDERED, INCLUDE COPY OF THIS FORM WITH NEXT COMMUNICATION TO APPLICANT.	

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EXAMINER INITIALS	OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)
<i>[Signature]</i>	41. Moyle, W. R., et al., Model of Human Chorionic Gonadotropin and Lutropin Receptor Interaction That Explains Signal Transduction of the Glycoprotein Hormones. J. Biol. Chem., 270(34):20020-20031 (1995)
	42. Moyle, W. R., Co-evolution of ligand-receptor pairs. Nature, 368:251-255 (1994)
	43. Pierce, J. G. and Parsons, T. F., Glycoprotein Hormones: Structure and Function. Ann. Rev. Biochem., 50:465-495 (1981)
	44. Remington's Pharmaceutical Sciences, Eighteenth Edition (Mack Publishing Co., Easton, PA) (1990) (Title page only)
	45. Sambrook, J., et al., "Molecular Cloning, a Laboratory Manual," Cold Spring Harbor Laboratory Press (1989) (Title page only)
	46. Sarkar, G. and Sommer, S. S., The "Megaprimer" Method of Site-Directed Mutagenesis. BioTechniques, 8(4):404-407 (1990)
	47. Schnolzer, M. and Kent, S. B. H., Constructing Proteins by Dovetailing Unprotected Synthetic Peptides: Backbone-Engineered HIV Protease. Science, 256:221-225 (1992)
	48. Smith, M., In Vitro Mutagenesis. Ann. Rev. Genet., 19:423-462 (1985)
	49. Stanton, P. G. and Hearn, M. T. W., The Iodination Sites of Bovine Thyrotropin. J. Biol. Chem., 262(4):1623-1632 (1987)
	50. Szkudlinski, M. W., et al., Purification and Characterization of Recombinant Human Thyrotropin (TSH) Isoforms Produced by Chinese Hamster Ovary Cells: The Role of Sialylation and Sulfation in TSH Bioactivity. Endocrinology, 133(4):1490-1503 (1993)
	51. Szkudlinski, M. W., et al., Subunit-specific functions of N-linked oligosaccharides in human thyrotropin: Role of terminal residues of α - and β -subunit oligosaccharides in metabolic clearance and bioactivity. Proc. Natl. Acad. Sci. USA, 92: 9062-9066 (1995)
	52. Ward, D. N., et al., Chemical Reduction-Reoxidation of the Glycoprotein Hormone Disulfide Bonds. Ballet and Bidard (eds) "Structure-function relationships of gonadotropins," Serono Symposium Publications, Raven Press, New York, 65:1-19 (1990)
	53. Wilson, J.M., et al., Superovulation of cattle with a recombinant-DNA bovine follicle stimulating hormone. Animal Reproductive Science, 33:71-82 (1993)
	54. Wu, H., et al., Structure of human chorionic gonadotropin at 2.6 Å resolution from MAD analysis of the selenomethionyl protein. Structure, 2:545-558 (1994)
	55. Yadav, S. P., et al., Holoprotein Formation of Human Chorionic Gonadotropin: Differential Trace Labeling with Acetic Anhydride. Mol. Endocrinol., 8:1547-1558 (1994)
	56. Yamazaki, K., et al., Potent Thyrotropic Activity of Human Chorionic Gonadotropin Variants in Terms of 125 I Incorporation and de Novo Synthesized Thyroid Hormone Release in Human Thyroid Follicles. J. Clin. Endocrinol. Metab., 80(2):473-479 (1995)
<i>[Signature]</i>	57. Zoller, M. J., New molecular biology methods for protein engineering. Curr. Opin. Struct. Biotechnol., 2:526-531 (1991)

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